

CLAIMS:

1. A method of modifying the activity of the heart, or of a portion thereof, comprising applying to said heart, or portion thereof a non-excitatory electric field of a magnitude, shape, duty cycle, phase, frequency and duration suitable to obtain the desired change, wherein said field is applied at a time such as to be unable to generate a propagating action potential.
2. A method according to claim 1, wherein the portion of the heart to which the non-excitatory field is applied is a heart chamber.
3. A method according to claim 1, wherein the non-excitatory electric field comprises an alternated current electric field.
4. A method according to claim 1, wherein the non-excitatory electric field has a temporal envelope selected from exponential temporal envelope, sinusoidal temporal envelope, square temporal envelope, triangular temporal envelope, ramped temporal envelope, sawtooth temporal envelope and biphasic temporal envelope.
5. A method according to claim 1, wherein the desired change is an increase of the force of contraction of said heart, heart chamber or portion thereof.
6. A method according to claim 1, wherein the desired change is an increase of the stroke volume of a chamber of the heart.
7. A method according to claim 1, wherein the desired change is an increase of the output flow of a chamber of the heart.
8. A method according to claim 1, wherein the desired change is a change in pressure.